

Claims

What is claimed and desired to be secured by United States Utility Patent is:

1. A Root Zone Injection surface irrigation apparatus comprising:

a pressurized source of water;

a water supply conduit;

water distribution means connected to said water supply conduit over the surface of the area being irrigated; said water distribution means including at least one water distribution conduit coupled in fluid communication to said water supply conduit, said at least one water distribution conduit including a plurality of injection nozzles formed at spaced intervals in said at least one water distribution conduit;

2. The surface irrigation apparatus defined in claim 1 wherein said surface irrigation apparatus includes a valve in said water supply conduit and a control means for controlling said valve.

3. The surface irrigation apparatus defined in claim 2 wherein said control means includes a controller and a moisture sensor for sensing moisture within the root zone being irrigated.

4. The surface irrigation apparatus defined in claim 2 wherein said delivery conduits defined in claim 1 include a plurality of spaced injection nozzles directing water downward into the soil root zone.

5. A surface irrigation apparatus defined in claim 1 wherein said pressurized source is water or nutrients.

Replacement Sheet

6. A surface irrigation apparatus comprising:

a water or nutrient supply conduit operable to receive water or nutrients from a supply of said water or nutrients;

valve means in said water or nutrients supply conduits for regulating flow of said water or nutrients through said water or nutrients supply conduit;

a plurality of water or nutrients distribution conduits coupled in fluid communication to said water or nutrients supply conduit, each of said water or nutrients distribution conduits being spaced at pre-selected locations along said water or nutrients supply conduit and in parallel relationship with each adjacent said water or nutrients distribution conduit;

a plurality of injection nozzles in said water or nutrients distribution conduits, said injection nozzles being formed in a spaced relationship along said water or nutrients distribution conduits;

7. A method for providing irrigation water along a surface location comprising the steps of:

routing a water supply conduit to said location;

coupling a plurality of water distribution conduits in fluid communication to said water supply conduit;

forming a plurality of injection nozzles at spaced locations in said water distribution conduits;

laying a surface to be watered by said irrigation water with a pre-selected pattern of said water distribution conduits;

watering said surface by directing said irrigation water through said water supply conduit and said water distribution conduits through said injection nozzles downward into said surface into the soil root zone.

8. The method defined in claim 7 wherein routing a water supply conduit includes a water or nutrients supply conduit.

9. The method defined in claim 7 wherein said watering step includes interposing a valve in said water supply conduit and regulating said valve by coupling a controller to said valve. Said controller is a commercially available controller.

10. The method defined in claim 7 wherein said regulating step includes placing a moisture sensor in said surface and signaling the moisture condition of said surface to said controller with said moisture sensor. Said moisture sensor is a commercially available moisture sensor.